

Compliance Checklist

for complying with the



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State of California

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California Environmental Protection Agency

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Department of Toxic Substances Control

California Environmental Protection Agency

Department of Toxic Substances Control

Office of Pollution Prevention
and Technology Development

Compliance Checklist

for complying with the

HAZARDOUS

WASTE

SOURCE

REDUCTION

&

MANAGEMENT

REVIEW ACT

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Document Availability

One complimentary paper copy may be requested by contacting the Office of Pollution Prevention and Technology Development (OPPTD) as noted below. A nominal charge is made for additional paper copies.

The Compliance Checklist is available from OPPTD's web site at [http://www.dtsc.ca.gov/Pollution Prevention/index.html](http://www.dtsc.ca.gov/Pollution%20Prevention/index.html).

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Acknowledgments

This document was modeled after the Hazardous Waste Minimization Checklist and Assessment Manuals developed by the Technology Clearinghouse Unit.

Disclaimer

The mention of commercial products, commercial services, their sources, or their use in connection with material reported herein is not to be construed as actual or implied endorsement of such products or services.

Contacting OPPTD

If you have questions or comments regarding the Compliance Checklist, the Hazardous Waste Source Reduction and Management Review Act of 1989, the regulations, or the Source Reduction Unit, you may contact OPPTD by

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EMAIL Send your questions about complying with SB 14 to <sb14@dtsc.ca.gov>.
Send requests for OPPTD publications listed in the section of this Compliance Checklist entitled "Further Information" to <opptddoc@dtsc.ca.gov>.

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Introduction

About SB 14

In 1989, the Legislature adopted landmark legislation that requires hazardous waste generators consider source reduction as the preferred method of managing hazardous waste. This law, proposed in Senate Bill (SB) 14 as the Hazardous Waste Source Reduction and Management Review Act of 1989 (Act), promotes source reduction over recycling and treatment because it avoids the generation of hazardous wastes and its associated management liability.

SB 14 applies to any generator who, by site, routinely generates through ongoing processes and operations, more than 12,000 kilograms of hazardous waste in a calendar year, or more than 12 kilograms of extremely hazardous waste in a calendar year. Once captured by SB 14, a generator must prepare a Source Reduction Evaluation Review and Plan (Plan), Hazardous Waste Management Performance Report (Report), and Summary Progress Report (SPR). SB 14 generators, including small businesses are now required to prepare and submit the SPR to Department of Toxic Substances Control by September 1, 2003. The preparation of these documents guides the generator in looking for opportunities to implement source reduction measures.

A small business may choose to complete any one of the following set of documents in place of the Plan:

- * Hazardous Waste Source Reduction Compliance Checklist;
- * industry-specific Waste Audit Study plus Sections 1,3,4,5, and 6 from the Compliance Checklist; or
- * industry-specific Hazardous Waste Minimization Checklist and Assessment Manual plus Sections 1,3,4,5 and 6 from the Compliance Checklist.

Small businesses may find that completing the forms in the Compliance Checklist or appropriate Waste Audit Study easier than completing Plan. The Office of Pollution Prevention and Technology Development (OPPTD) developed the Compliance Checklist for use by companies that are not addressed by the industry-specific Waste Audit Studies and Hazardous Waste Minimization Checklist and Assessment Manuals. These documents may be used in place of the Plan by small businesses that have inadequate technical and financial resources for obtaining information and assessing source reduction methods. The Compliance Checklist, Waste Audit Studies, and Checklist and Assessment Manuals are available from OPPTD. Refer to “Contacting OPPTD” at the beginning of this Compliance Checklist for ways to contact OPPTD.

A small business may use its most recent biennial report, as required by section 66262.41 of the California Code of Regulations, as the Report required by SB 14.

About the Compliance Checklist

This document establishes the format of the Compliance Checklist and consists of the following seven sections.

“Section 1: Generator Information” contains basic information about the generator that is completing the Compliance Checklist.

“Section 2: Compliance Checklist” helps the generator become aware of the benefits of source reduction and to consider source reduction opportunities at the generator's site. The list of source reduction measures in the Compliance Checklist is by no means a complete listing of all source reduction opportunities. Generators are encouraged to seek and create innovative source reduction ideas that are appropriate for the specific situations at their site.

“Section 3: Evaluation of Source Reduction Measures” provides suggestions to help generators evaluate potential source reduction measures.

“Section 4: Implementation Timetable” documents the time frames a generator will establish for implementing selected source reduction measures.

“Section 5: Numerical Goal” is the generator's four-year numerical goal that estimates the overall reduction of hazardous waste at the generator's site, assuming optimum conditions to achieve feasible source reduction measures.

“Section 6: Certification” provides the certification language as required by SB 14.

“Section 7: SB 14 generators including small businesses, are required to prepare the “Summary Progress Report” and are required to submit it to DTSC beginning September 1, 1999 and every four years thereafter.

For more information regarding issues such as additional reporting requirements, confidentiality of information and the availability of source reduction documents, please refer to the "Guidance Manual for Complying with the Hazardous Waste Source Reduction and Management Review Act of 1989."

Source Reduction and the Waste Minimization Hierarchy

In its findings and declarations, the Legislature has stated that the intent of SB 14 is to promote the reduction of hazardous waste at its source, and wherever source reduction is not feasible or practicable, to encourage recycling. Where it is not feasible to reduce or recycle hazardous waste, the waste should be treated in an environmentally safe manner prior to disposal to minimize the present and future threat to public health and the environment.

Source reduction takes its place at the pinnacle of the Waste Minimization Hierarchy, and is preferred to recycling and treatment options because it is likely to pose the lowest environmental risk. Furthermore, source reduction avoids waste management costs and liability while contributing to a company's overall competitiveness.

Source reduction is defined as any action which causes a net reduction in the generation of hazardous waste, and may also include any steps taken before a hazardous waste is generated to lessen the properties which cause the waste to be classified as hazardous. The regulations identify five approaches to achieve source

reduction. These approaches are presented to help the generator organize strategies toward achieving the maximum benefits from implementing source reduction at the generator's site. There may be some overlap and uncertainty regarding the approach that best describes a specific action. However, we urge the generator to place an emphasis on implementing a plan to maximize source reduction rather than on placing an activity within the most appropriate of the five approaches.

The five source reduction approaches include all of the following:

- 1) Administrative Steps: Good operating practices that apply to the human aspect of conducting daily operations at the site. These include employee training, waste minimization policies, and inventory control.
- 2) Input Changes: Changes in raw materials or feedstocks to reduce, avoid, or eliminate the hazardous materials that enter the production process, thereby avoiding the generation of hazardous wastes within the production process.
- 3) Operational Improvements: Activities such as loss prevention, waste segregation, production scheduling, maintenance operations and overall site management.
- 4) Production Process Changes: Process changes, changes in production methods or techniques, equipment modifications, changes in process operating conditions, such as temperature, pressure, etc., process or plant automation, or the return of materials or their components for reuse within existing processes.
- 5) Product Reformulations: Changes in design, composition or specification of final or intermediate products.

Source reduction planning can be particularly beneficial for generators that are taking a look at source reduction for the first time. Often there are simple and inexpensive source reduction measures that can reduce significant quantities and or toxicities of waste. Due to the low cost of these measures, the economic benefit of implementing source reduction can be large. The generator completes the checklist, focusing on identifying the simple measures that can enable significant waste stream reduction and save hazardous waste management costs and reducing future liability.

Since this checklist is intended to provide general source reduction guidance to various operations, many of the considerations listed in the checklist may not directly apply to each generator's specific business or process. We urge generators to think about each concept presented in the context of one's own operation to see if the idea can be applied directly, or perhaps in a different way, to secure the benefit discussed at the right side of the page. Remember, the elimination of hazardous waste is good for the environment and can also save you money.



Section 1 Generator Information

Company Name: _____

Generator's USEPA ID Number: _____

SIC Code: _____

NAICS Code* _____

Location Address:

Street: _____

City: _____ State: _____ Zip: _____

Mailing Address:

Street: _____

City: _____ State: _____ Zip: _____

Contact Person: _____

Telephone: (_____) _____ - _____

Fax number: (_____) _____ - _____

Email: _____

Quantity of hazardous waste generated in the reporting year** (total) : _____ tons

* Your North American Industry Classification System (NAICS) Code can be determined by going to <http://www.naics.com>

**Reporting year is the calendar year immediately preceding the year in which your Compliance Checklist is to be prepared.

Waste Description and corresponding California Waste Code (CWC). Use additional copies of this page if you need more space to describe waste streams.

CWC: _____

Waste description: _____

Weight Generated in 2002: _____

CWC: _____

Waste description: _____

Weight Generated in 2002: _____

CWC: _____

Waste description: _____

Weight Generated in 2002: _____

Section 2 Compliance Checklist

Complete the following checklist to determine if you are taking advantage of opportunities to reduce your hazardous waste before it is generated. The preferred response to each question is highlighted in bold print and helpful suggestions or benefits are discussed in the right hand column.

2.1 Administrative Steps - Business Practices

1. Do you have a formal policy or mission statement stating your commitment to source reduction?

☐ Yes ☐ No

✓ A formal statement supporting source reduction is an important part of encouraging employee source reduction awareness.

2. Do you offer an incentive program to employees to promote good housekeeping practices?

☐ Yes ☐ No

✓ Incentive programs encourage employees to follow good housekeeping practices. Incentive programs do not have to be monetary programs, but can involve other incentives such as recognition or awards.

3. Does your accounting procedure allocate the costs associated with the management of hazardous wastes to the processes generating the hazardous wastes?

☐ Yes ☐ No

✓ Separate accounting of hazardous waste management costs by process or production area can be a valuable tool to prioritize source reduction efforts by directing initial attention to the most costly wastes. Sometimes just by individualizing the cost of waste management workers will find ways to reduce waste generation.

2.2 Administrative Steps - Employee Education

1. Do you offer employee training on how to avoid excessive waste generation through the proper handling and storage of materials?

☐ Yes ☐ No

✓ Management should make a commitment to develop awareness of source reduction among employees and offer education and training opportunities. You can reduce the amount of hazardous waste generated due to spills if you train your employees to properly handle and store hazardous materials. Some trade associations and local environmental health agencies sponsor employee training seminars and some consulting firms offer training in handling hazardous materials as part of their package of services.

2. Are employees educated in source reduction techniques and encouraged to apply them?

☐ Yes ☐ No

✓ Introducing employees to source reduction concepts will allow them to develop innovative ideas that enable you to reduce disposal costs, minimize liability, and protect worker health and safety.

3. Do you publicize your source reduction achievements in the form of a newsletter to your employees and your community?

☐ Yes ☐ No

✓ Sharing source reduction successes encourages source reduction awareness among employees. Successful source reduction activities can make a good local news story and can help earn and retain customers and clients.

4. Are periodic sessions held to keep employees up-to-date on source reduction measures in the use of hazardous materials?

☐ Yes ☐ No

✓ Source reduction training is not a one time exercise. A full time, ongoing commitment must be made by both owners and operators of a business.

5. Are job functions defined for each employee?

☐ Yes ☐ No

✓ Identifying specific duties for personnel can help you prevent mishandling hazardous waste. Communicate to the employees what their job entails and make sure they understand what is expected of them. Make source reduction a part of everyone's job. Provide written guidance, such as a job manual. Encourage workers to offer source reduction suggestions.

6. Are regular meetings held to keep personnel current on hazardous materials management policy and procedures?

☐ Yes ☐ No

✓ As new developments occur in hazardous materials management, employees should be kept informed in order to perform their duties more efficiently.

2.3 Administrative Steps - Inventory Control

1. Are raw material containers inspected before being accepted?

☐ Yes ☐ No

✓ Inspecting containers before accepting them can prevent the receipt of leaking or damaged containers which can lead to an expensive clean up and disposal costs.

2. Are all raw materials tested or checked before being accepted from the suppliers?

☐ Yes ☐ No

✓ Off-specification raw materials, if accepted, can become hazardous waste. In addition, the use of these materials may generate an off-specification product which may then require disposal as a hazardous waste. Some off-specification products can be reworked into usable products.

3. Are raw material containers dated as received?

☐ Yes ☐ No

✓ A received date is important for keeping track of the shelf life of a raw material and preventing materials from becoming obsolete and a hazardous waste. It also comes in handy when rotating stock.

4. Do you use a "first in, first out" materials usage policy?

☐ Yes ☐ No

✓ Using materials in a "first in, first out" order can prevent stock from becoming obsolete and a hazardous waste. You can easily rotate and maintain your stock by labeling, dating, and inspecting new material containers as they are received. Then, use the earliest labeled stock.

5. Do you purchase raw materials and perishable hazardous material stocks on an "only as needed" basis?

☐ Yes ☐ No

✓ Having a minimum supply of raw materials can prevent accumulation and eliminate large amounts of excess materials which may not be used at a later date. Also, overstock of perishable materials can contribute to hazardous waste.

6. Are material balances performed for the critical processes of your site?

☐ Yes ☐ No

✓ Performing a material balance for critical processes will allow you to ensure the efficiency of production as well as optimize your source reduction efforts by knowing the raw materials entering and the products and wastes leaving your processes.

7. Are material inventories computerized? Do you track the usage of raw materials?

☐ Yes ☐ No

✓ Computerizing your inventory will allow you to easily track the materials you use and how much is remaining. This will allow you to keep the inventory at a point where you use up your stock just as new materials are arriving.

2.4 Administrative Steps - Materials Storage and Handling

1. Are hazardous materials stored in covered containers?

☐ Yes ☐ No

✓ Covering individual containers can prevent evaporation, contamination by foreign particles, and the frequency of spills.

2. Is your hazardous materials storage area covered?

☐ Yes ☐ No

✓ Hazardous materials are best protected in covered areas. Uncovered storage areas allow rainwater to contaminate raw materials and can increase the volume of hazardous waste. Sunlight can degrade or change the character of raw materials. Absorbed heat can raise pressure inside containers, creating a potentially dangerous situation.

3. Are hazardous materials stored separately from nonhazardous materials?

☐ Yes ☐ No

✓ Hazardous materials should be stored separately from nonhazardous materials to prevent the creation of larger amounts hazardous waste if a spill occurs.

4. Are materials stored in reusable containers?

☐ Yes ☐ No

✓ Storing materials in reusable containers will allow you to return the empty container to the supplier and reduce the amount of waste you must dispose. Check with your supplier to see if return options are available.

5. Are raw materials stored in high traffic areas?

☐ Yes ☐ No

✓ Heavy traffic may contaminate raw materials with dirt or dust and may cause spilled materials to become dispersed throughout your site.

If yes, can traffic through the storage area be reduced?

☐ Yes ☐ No

6. Do you store hazardous materials within a diked concrete pad?

☐ Yes ☐ No

✓ A diked concrete pad will contain spills better than asphalt or dirt. There are also molded plastic pallets available that provide secondary containment.

7. Do you store hazardous wastes and hazardous materials in a secure storage area?

☐ Yes ☐ No

✓ A secure storage area will prevent unauthorized persons from entering the storage area and harming themselves or spilling materials and waste.

8. Are the proper tools and procedures available to move drums safely?

☐ Yes ☐ No

✓ Powered equipment or hand trucks should be used to move drums so as to prevent damage or punctures. Under no circumstances should drums be tipped or rolled, even when empty. Negligent transport procedures will cause drum damage, particularly to seams, which can lead to leaks or ruptures during future use. Drums should also be capped tightly before they are moved.

2.5 Administrative Steps - Spill/Leak Control

1. Do you generate hazardous wastes due to spills during raw material storage or during equipment cleaning?

☐ Yes ☐ No

✓ Spills occur mainly because of splashing during manual transfer, tank overfilling, and leaks in process equipment and piping. Scoop spills up to the fullest extent possible, and try to rework them into product.

✓ Remember to keep equipment in good repair and provide adequate oversight to prevent spilling during manual transfer.

2. Do you have safeguards to prevent the spillage of liquids while filling storage tanks?

☐ High level shutdown alarms

☐ Flow totalizers

☐ pipeline drainage or purging

☐ dikes

✓ All of these safeguards can help you prevent and reduce the amount of hazardous waste you generate due to spills.

3. Do you have a prepared plan to respond to hazardous materials spills?

☐ Yes ☐ No

✓ A prompt response helps to minimize health risks to workers, reduce adverse environmental effects, and reduce potential liability. Furthermore, the law requires a prepared plan to respond to hazardous spills.

4. Do you routinely inspect all waste storage tanks, drums, and containers for leaks and proper storage?

☐ Yes ☐ No

✓ Routine inspections can reduce hazardous spills by identifying potential problems such as leaking or improperly stored containers.

5. Do you routinely inspect and maintain your equipment and processes to prevent leaks and spills?

☐ Yes ☐ No

✓ Routine inspections of pumps, valves, pipes and processes for leaks can result in prompt replacement of gaskets, packing or the addition of catch basins to reduce waste.

6. If a hazardous waste spill or improper storage of a waste is discovered during an inspection, is it dealt with immediately?

☐ Yes ☐ No

✓ An immediate response to a hazardous waste spill or improper storage of hazardous waste can minimize employee exposure, damage to the environment, liability, and waste disposal costs. Even a small dripping leak can produce several gallons of waste per day.

7. Do you conduct practice drills for major spills?

☐ Yes ☐ No

✓ Periodic drills can improve the readiness and effectiveness of employees in dealing with emergency situations. You can reduce wastes generated from spills and their cleanup with a quick response to a spill.

2.6 Input Changes

1. Have you researched the use of nonhazardous or less hazardous material alternatives?

☐ Yes ☐ No

✓ Substitution of nonhazardous or less hazardous materials for hazardous materials reduces or eliminates a hazardous waste stream.

✓ Examples of alternatives include the use of soy oil-based printing inks as a substitute for petroleum-based printing inks, using aqueous cleaner for a chlorinated solvent, and using trivalent chromium electroplating in place of hexavalent chromium plating.

✓ Nonhazardous and less hazardous alternatives should be fully investigated before making a final decision.

2. Have you considered substituting aqueous cleaners for petroleum-based or chlorinated solvents?

☐ Yes ☐ No
☐ Does not apply

✓ Aqueous cleaners are nonflammable and do not generally give off toxic fumes. In addition, most aqueous cleaners are less hazardous to workers, public and the environment.

✓ Make sure the cleaning is really necessary. Some companies have found that they can completely eliminate some of the cleaning steps with no effect on product quality. Some raw materials may be purchased without requiring cleaning, thus eliminating the initial cleaning step.

3. If you are using caustic cleaners, have you tried alternative commercial cleaning solutions?

☐ Yes ☐ No
☐ Does not apply

✓ Businesses may be able to substitute caustic cleaning solutions with aqueous alkaline cleaning solutions that halve the replacement frequency, resulting in less waste requiring disposal.

4. Are biodegradable, film-free detergents a possible substitution for cleaning solvents?

☐ Yes ☐ No
☐ Does not apply

✓ Use of biodegradable cleaners could eliminate hazardous wastes such as solvent contaminated rags, waste cleaning solvent, and empty solvent containers. Biodegradable cleaners have two significant environmental benefits over solvents: they will not contribute to photochemical smog as do volatile organic compounds (VOCs), and they do not present a respiratory health hazard to workers.

5. Have you considered using low VOC paints and coatings?

☐ Yes ☐ No
☐ Does not apply

✓ Using low VOC paints and coatings can reduce hazardous waste and air pollution, as well as significantly reduce the need for and the use of potentially hazardous materials, such as solvents derived from petroleum distillates. Exercise caution when selecting or using low VOC paints since they may still contain toxic metal pigments.

2.7 Operational Improvements

1. Do you segregate your waste streams?

☐ Yes ☐ No

Do you segregate all empty bags, packages, and containers that contained hazardous materials from those that contained nonhazardous materials?

☐ Yes ☐ No

✓ Segregating wastes will aid in recycling materials and eliminate the mixing of nonhazardous wastes with hazardous wastes. Mixed wastes are more difficult and costly to treat and dispose.

2. Are your hazardous waste and nonhazardous waste containers properly labeled?

☐ Yes ☐ No

✓ Proper labeling is a requirement of federal law. Properly labeled containers may decrease the likelihood of mixing incompatible wastes which might cause an explosion, or mixing hazardous wastes with nonhazardous wastes which could increase your volume of hazardous waste.

3. Are liquid materials transferred using pumps and piping?

☐ Yes ☐ No
☐ Does not apply

✓ Transporting liquids using pumps and piping can help you reduce the amount of chemicals spilled during transfer.

4. Are the materials stored close to the process areas where they are used?

☐ Yes ☐ No

✓ Storing materials near the processing areas where they are used will reduce the distance you need to transport them and therefore reduce your handling and spillage.

5. Do you maintain and enforce a clear policy of using raw materials only for their intended uses?

☐ Yes ☐ No

✓ You may generate unnecessary hazardous waste if you use supplies for purposes other than their intended uses. For example, don't use equipment cleaning solvents to clean your floors.

6. Do you plan your production schedule to reduce the generation of hazardous waste?

☐ Yes ☐ No

✓ Plan your production schedule in a way that reduces the need for intermediate storage and excessive cleaning. For example when blending paints, do you schedule the tint mixing from light to dark to avoid excessive cleaning, or mix only those paints having a common base at one time?

7. Have you attempted to purchase pre-weighed materials in soluble bags?

☐ Yes ☐ No

✓ Additives may be available in pre-weighed soluble bags, which do not require container disposal.

8. Do you plan your mixing operations so that you will only use the necessary raw materials?

☐ Yes ☐ No

✓ Planning is the key to efficiency. Plan your mixing so that you use only the necessary components. A properly sized container will also reduce waste.

9. Do you test your products in your quality control laboratory before attempting full scale production?

☐ Yes ☐ No

✓ Accurate lab scale tests can eliminate the production of off specification products, which can become hazardous waste.

10. The solvent waste generated from equipment cleaning is

☐ drummed for disposal

☐ drummed for disposal after being used _____ times

☐ drummed for use in a subsequent process

☐ recycled off-site

☐ recycled/reused on-site

☐ sent to a holding tank

☐ does not apply

✓ Maximize your benefits from the solvents you do use. Reusing solvents as much as is practicable can significantly reduce your total solvent waste generation. For example can you reuse a solvent from a process cleaning operation as a product thinner or ingredient?

11. Is the piping to and from raw material or product tanks pigged before flushing?

☐ Yes ☐ No
☐ Does not apply

✓ Use a plastic or foam pig to clean pipes. The pig (slug) is forced through the pipe from the tank. The pig pushes ahead any product left clinging to the walls of the pipe. This increases yield and reduces the degree of pipe cleaning required.

✓ The equipment (launcher and catcher) must be carefully designed so as to prevent spills, sprays, and potential injuries, and the piping runs are free of obstructions so that the pig does not become stuck or lost in the system.

12. What is the cleaning method used for cleaning raw material and product storage tanks?

☐ manually scraped

☐ washed with high pressure spray system using caustic then solvent rinsed

☐ Other _____

☐ does not apply

✓ To reduce the amount of product left clinging to the walls of a raw material or product storage tank, use rubber wipers to scrape the tank sides.

✓ Mechanization or automation of this step should be considered to increase raw material yield and reduce the quantity of waste produced from tank cleaning.

13. Have you established procedures for cleaning process equipment? Are they cleaned immediately after completing the task? Is there a scheduled maintenance and cleaning program?

☐ Yes ☐ No
☐ Does not apply

✓ Equipment should be cleaned immediately in order to reduce the amount of solvent that will be necessary to clean it.

✓ In some instances, having a scheduled maintenance and cleaning program for process equipment and parts can have a profound impact on reducing hazardous wastes.

14. Is there an established procedure for communication between cleaning and production crews?

☐ Yes ☐ No

✓ Proper coordination between production and cleaning crews can prevent such things as product drying in tanks.

15. Have you considered a high pressure spray system for cleaning parts or equipment?

☐ Yes ☐ No
☐ Does not apply

✓ High pressure spray systems can be used to clean equipment and tanks and reduce water use by 80 to 90 percent. In addition, high pressure sprays can remove partially dried product so that the need for caustic cleaners is reduced.

16. Do you capture unused raw material or product prior to cleaning process equipment?

☐ Yes ☐ No

✓ The method for saving unused raw material or product will be process specific. In general, capturing as much material as possible before cleaning is important because it saves on the use of cleaning solvent.

17. Do you follow the manufacturer's suggested methods for cleaning and using your process equipment?

☐ Yes ☐ No

✓ It is important to follow the manufacturer's suggested procedures. They are intended to maximize efficiency and minimize waste.

18. Can you install counter current rinsing processes?

☐ Yes ☐ No
☐ Does not apply

✓ Counter current rinsing can reduce waste generation especially if the most concentrated bath becomes makeup for the process solution.

2.8 Production Process Changes

1. Do you use automated feeding systems to feed raw materials into your processes?

☐ Yes ☐ No

✓ Automated feeding systems can help reduce spillage. Switching from numerous small containers to one larger container can help reduce cleaning waste. For large scale dedicated equipment, clean-in-place systems are effective in reducing cleaning waste.

2. If you are planning any future plant modernizations, do you consider replacing existing equipment with more efficient ones which generate less hazardous waste?

☐ Yes ☐ No

✓ More efficient equipment can reduce your total hazardous waste volumes while meeting or exceeding current production rates.

3. Have you investigated the effect of reduced cleaning on product quality?

☐ Yes ☐ No

✓ Unnecessary cleaning of equipment increases the amount of cleaning wastes generated. The feasibility of eliminating cleaning steps between subsequent production steps should be explored. Conduct experiments on a small scale in the laboratory to measure the degree of contamination due to the elimination of cleaning. If contamination of the products is within quality control standards, then the clean up step can be eliminated.

4. Have you replaced your single-stage rinse system with a multi-stage countercurrent rinse system?

☐ Yes ☐ No

✓ This can reduce the amount of wastewater generated. Multiple rinse tanks can be used to provide sufficient rinsing while significantly reducing the volume of rinse water used. The use of a multi-stage countercurrent rinsing system can use up to 90% less rinse water than a conventional single-stage rinse system.

5. Do you employ drag-out rinsing techniques?

☐ Yes ☐ No

✓ Drag-out loss of process chemicals is a significant source of waste generation. Drag-out rinsing techniques can reduce drag-out substantially.

6. Do you operate process baths at the lower end of the manufacturer's suggested range of operating concentration?

☐ Yes ☐ No

✓ Controlling the chemical concentration of the process bath can reduce the drag-out losses.

7. Are the plating solution tanks at your facility equipped with a drip collection device?

☐ Yes ☐ No

✓ Drag-out of plating solutions can be minimized by installing lip (drip) collection devices after each tank.

2.9 Product Reformulation

1. Can you modify the specifications, design or composition of your product so that less hazardous waste is generated?

☐ Yes ☐ No
☐ Does not apply

✓ If your product results in a hazardous waste at the end of its service life, it may be costly to manage as a hazardous waste and may be a long term liability to you and your customers.

Section 3 Evaluation of Source Reduction Measures

After completing the checklist and identifying potential source reduction opportunities, you must evaluate your options to select those you wish to implement.

Source reduction is defined in the law as any action which causes a net reduction of the generation of hazardous waste, or any action taken before the hazardous waste is generated that results in the lessening of the properties which cause it to be classified as a hazardous waste. There are five source reduction approaches under which specific source reduction measures may be grouped:

- input change
- operational improvement
- production process change
- product reformulation
- administrative steps

However, source reduction measures are none of the following:

- any action taken after a hazardous waste is generated
- any action that concentrates the constituents of a hazardous waste to reduce its volume or that dilutes the hazardous waste to reduce its hazardous characteristics
- any action that shifts hazardous wastes from one environmental medium to another environmental medium
- treatment

There are a variety of different factors to consider when evaluating potential source reduction measures. These factors include:

- expected change in the amount of hazardous waste generated;
- technical feasibility;
- economic feasibility;
- effect on product quality;
- employee health and safety considerations;
- requirements for permits, variances, and compliance schedules of applicable agencies; and
- releases and discharges to all media.

You are not limited to the factors listed above. You may develop additional factors that you feel are important in developing a successful source reduction program at your site. Examples of additional factors you may consider include:

- reduction in the hazardous characteristic of the waste;
- previous success of the measure within your organization;
- previous success of the measure in other industries;
- length of implementation period;
- ease of implementation.

Section 4 Implementation Timetable

Source reduction measures you have chosen to implement at your site	The dates when you plan to begin implementing each measure and the date when the measure will be operational

Section 5 Numerical Goal

Every generator who is subject to SB 14 must prepare a four-year numerical source reduction goal. The goal is included in a generator's compliance checklist (or Plan, if applicable).

The goal is not simply a reflection of your intended source reduction under SB 14, rather it is your estimate of the source reduction that your site could optimally strive to achieve over the next four years. The goal, a single numerical percentage, would reflect your organization's source reduction vision and commitment. The goal must reflect your company's waste stream reductions due only to source reduction and would exclude effects due to production variation or economic influences.

For example, Source Reduction Goal (%) =

$$\frac{\text{Total hazardous waste generation reduced by optimizing source reduction practices}}{\text{Total hazardous waste generation if source reduction measures were not considered at your site}} \times 100$$

The four-year numerical source reduction goal for this site is:

_____ % for the years _____ to _____ (your four-year planning period).

Section 6 Certification

There are two certifications required by regulations - a technical certification and a financial certification. (Section 67100.13 Title 22 California Code of Regulations).

6.1 Technical Certification

The compliance checklist must be reviewed and certified by any one of the following persons for technical completeness. Check the appropriate box and provide the information below:

- ☐ an engineer who is registered as a professional engineer pursuant to section 6762 of the Business and Professions Code
- ☐ an environmental assessor who is registered pursuant to section 25570 of the Health and Safety Code
- ☐ an individual who is responsible for the processes and operations of the site

The person performing the technical certification of the compliance checklist must certify all of the following:

- The compliance checklist identifies and addresses all of the major waste streams at the site.
- The five approaches to source reduction have been considered.
- The Plan fully explains the decision process used to determine which measures to implement, including the rationale for rejecting the measures that will not be implemented. The Plan includes an implementation schedule.
- The Plan does not merely shift hazardous waste from one environmental medium (air, water or land) to another by increasing emissions or discharges to air, water or land.

TECHNICAL CERTIFICATION STATEMENT FOR THE COMPLIANCE CHECKLIST

(Example Format)

I certify this compliance checklist meets all of the following requirements:

- (1) The compliance checklist addresses each hazardous waste stream identified pursuant to section 67100.5(h), Title 22 of the California Code of Regulations.
- (2) The compliance checklist addresses the source reduction approaches specified in section 67100.5(j), Title 22 of the California Code of Regulations.
- (3) The compliance checklist clearly sets forth the measures to be taken with respect to each hazardous waste stream for which source reduction has been found to be technically feasible and economically practicable, with timetables for making reasonable and measurable progress and documents the rationale for rejecting available source reduction measures.
- (4) The compliance checklist does not merely shift hazardous waste from one environmental medium to another environmental medium by increasing emissions or discharges to air, water or land.

Name: _____

Title: _____

Signature: _____ Date: ____/____/____

6.2 Financial Certification

The compliance checklist must be reviewed and certified that the reviewer is made aware of the checklist contents and resource commitment. Financial certification shall be made by any one of the following persons able to commit company finances. Check the appropriate box and provide the information below:

- ☐ the owner
- ☐ the operator
- ☐ the responsible corporate officer of the site
- ☐ an authorized individual capable of committing financial resources necessary to implement selected source reduction measures.

“I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or the persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for making false statements or representations to the Department, including the possibility of fines for criminal violations.”

Please print the name of the person certifying this compliance checklist:

Name: _____

Title: _____

Signature: _____ Date: ____/____/____



Section 7 The Summary Progress Report

7.1 Completing the Summary Progress Report

Generators subject to SB 14, are required to prepare and submit a Summary Progress Report to DTSC by September 1, 2003. SB 14 legislation mandates the submittal starting September 1, 1999, and every four years thereafter. The submittal is done on DTSC Form 1262, provided in this subsection. The form is also available on the DTSC website listed in this chapter.

DTSC Form 1262, “Summary Progress Report” (SPR), now consists of Table 1 and Table 2. In order to simplify the form, this latest edition SPR is a revision of the previous SPR. Revisions include specific instructions that are integrated into Tables 1 and 2. Generators should read all the instructions integrated into the latest SPR form very carefully before completing Tables 1 and 2. **All SB 14 generators, including small businesses, are required to submit the SPR to DTSC by September 1, 2003.**

The SPR requires quantitative data and some narrative description. If you are a generator subject to SB 14, you are required to include this information in your SPR for the period 1998-2002. This is your opportunity to document your source reduction successes over the last four years or longer if information is available.

Table 1 provides for general information and total hazardous waste generation data for 1998 and 2002. Table 1 also requests a brief summary of and comments on your organization’s historical source reduction successes and waste management practices. Your comments can also include reuse, recycling, treatment, and disposal activities. If more space is needed for comments, please add a separate page to provide complete information. Since the information requested in Table 1 is for the entire facility, Table 1 is only completed once for each site.

Table 2 addresses accomplishments by specific waste stream, as achieved over the last four year period 1999-2002. Table 2, Section 25 addresses projections by specific waste stream covering the next four year period, 2003-2006. Since the information required for Table 2 is waste stream specific, a separate Table 2 must be completed for each major waste stream and for each minor waste stream for which a source reduction measure was selected.

Before completing your SPR, please note the following:

- If a generator was required to submit an SPR for 1998 and is also required to submit one for 2002, the generator **must** provide all information requested in both Tables 1 and 2.

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- If a generator was not required to submit an SPR for 1998, but is required to report for 2002, the generator **must** fill out only form items for 2002 and not for 1998. This generator is not required to complete the Accomplishments Portion (Section 24) of Table 2.
 - If a generator was required to report only for 1998 and not for 2002, the generator is **not** required to prepare and submit the SPR. Regardless, OPPTD requests that active generators complete and submit parts of Table 1 and Table 2 for 1998, as appropriate.

Note that the SPR Form 1262 is also to be used to report for extremely hazardous waste. If you have identified extremely hazardous waste in your 1998 or 2002 source reduction documents, please complete a separate copy of Form 1262 for your extremely hazardous waste streams and make notation with the waste description in Section 21 of Table 2.

Also note that the SPR is not confidential, and OPPTD will make all SPRs available to the public upon request. If a trade secret issue is involved, follow the procedure discussed in Chapter 8 of this Guidance Manual.

Contact OPPTD if you need to obtain additional copies of the Summary Progress Report publication No. 003. The publication includes both Tables 1 and 2 of Form 1262, and also includes supporting text. The printed publications can be mailed to you by OPPTD. The publications are also available for you to print from the DTSC web site [http://www.dtsc.ca.gov/Pollution Prevention/index.html](http://www.dtsc.ca.gov/Pollution%20Prevention/index.html). If you have questions regarding the SPR or SB14 in general, please contact the Source Reduction Unit at (916) 322-3670.

7.2 Solutions to Common SPR Mistakes

September 1, 1999 was the first time that generators subject to SB 14 were required to prepare and submit an SPR to DTSC. Following that deadline, OPPTD evaluated all submitted SPRs for accuracy and completeness. Mistakes were most frequently found in two specific areas.

- 1) Differentiating hazardous waste streams that are pretreated on site, and then discharged, from those that are not.

The following changes have been made to the Guidance Manual and to Form 1262 to alleviate the confusion associated with the waste stream categories. Hazardous waste streams that are pretreated on site, then subsequently discharged via the sewer system to a publicly owned treatment works or to a receiving water under a National Pollution Discharge Elimination System (NPDES) permit, are now referred to as Category A wastes in the Guidance Manual. This type of waste stream was formerly called “aqueous waste.” All other hazardous waste streams subject to SB 14, which were formerly called “nonaqueous wastes”, are now referred to as Category B wastes. These terminology changes are relevant to Sections 15, 16, and 23 of Revised SPR Form 1262.

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- 2) Estimating source reduction achieved (i.e., the amount of waste reduced due to implementing source reduction).

More significant is the uncertainty surrounding what to report for “source reduction achieved.” The last item in Table 2, Section 24 of the revised SPR Form asks the generator to **estimate the quantity of waste reduced annually as a result of implementing a source reduction procedure**. No single method of estimating this value is appropriate for all facilities or all waste streams. In Chapter 6 of the Guidance Manual (2002 edition), there is a gray box titled “Quantify Source Reduction Achieved,” which provides examples that a generator might consider using to estimate their annual waste reduction, in pounds per year, due to implementing one or more source reduction measures on a specific waste stream.

7.3 Send Completed SPRs to OPPTD

On or before September 1, 2003 submittal deadline, please mail your completed Summary Progress Report Form 1262 for the 2002 reporting year to:

Office of Pollution Prevention and Technology Development
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California, 95812-0806
Attention: Summary Progress Report/Source Reduction Unit

The SPR may be e-mailed to DTSC at spr@dtsc.ca.gov. Also, an electronic version of the SPR may be available by Spring 2003. Please contact DTSC for the status of this electronic SPR.

After September 1, 2003, DTSC will undertake a compliance review of all SPR forms received by that deadline date. DTSC will process and compile collected information into a database. The database will help OPPTD analyze statewide hazardous waste reduction trends. The database may be used to prepare fact sheets, industry specific assessment reports, and reports documenting the progress of California’s generators towards reducing hazardous waste. DTSC will also use the collected information to estimate statewide hazardous waste source reduction progress. This information may also be used to report to the Legislature on statewide source reduction success.

SUMMARY PROGRESS REPORT**TABLE 1: GENERAL INFORMATION**

Date _____

A hazardous waste generator subject to SB 14, is required to complete and submit Tables 1 and 2 to the Department of Toxic Substances Control by September 1, 2003. The generator is to submit only one Table 1. The generator may need to submit more than one Table 2, one for each reportable waste stream as stated thereon.

See Summary Progress Report publication or SB 14 Guidance Manual Chapter 7, for assistance.

(1) NAME OF GENERATOR, FACILITY, or BUSINESS		
(2) EPA ID NO.	(3) SIC CODE (provide SIC or NAICS)	(4) NAICS CODE
(5) STREET ADDRESS	(6) CITY	(7) COUNTY
(8) MAILING ADDRESS	(9) CITY	(10) ZIP CODE
(11) CONTACT NAME		(12) CONTACT PHONE
(13) TYPE OF BUSINESS, OPERATION, or ACTIVITY		

(14) SB 14 reportable total quantities of Hazardous Waste Generated at Site, for 1998 and 2002 Reporting Years.

Reportable Total Quantities include all hazardous wastes subject to SB 14.

Do not include nonroutinely generated, exempted, or secondary wastes. Exempted and nonroutinely generated wastes are listed in Section 67100.2(c), Title 22, California Code of Regulations. Secondary waste is hazardous waste generated as a result of onsite treatment of HAZARDOUS waste.

Obtain information requested below from your 1998 and 2002 Plans or Compliance Checklists.	1998	2002
(15) SB 14 hazardous waste processed onsite in a wastewater pretreatment unit for discharge to POTW or NPDES permit (Category A*) Total:	lbs	lbs
(16) All other SB 14 hazardous waste (Category B*) Total:	lbs	lbs
(17) All extremely hazardous waste Total:	lbs	lbs

* Category A was previously referred to as aqueous waste. Category B was previously referred to as nonaqueous waste.

(18) COMMENTS regarding hazardous waste source reduction and recycling activities (add page if needed).

TABLE 2: SPECIFIC WASTE STREAM INFORMATION

DATE _____

Complete and submit a separate Table 2 for each major hazardous waste stream.

Complete and submit a separate Table 2 for each minor hazardous waste stream for which a source reduction measure was selected.

IDENTIFICATION

(19) NAME OF GENERATOR, FACILITY, or BUSINESS	(20) EPA ID NO.
(21) HAZARDOUS WASTE STREAM DESCRIPTION	(22) CALIFORNIA WASTE CODE CWC _____
(23) THIS HAZARDOUS WASTE IS (please check one): <input type="checkbox"/> Processed onsite in a wastewater pretreatment unit for discharge to POTW or NPDES permit (Category A) <input type="checkbox"/> Other SB 14 hazardous waste (Category B) <input type="checkbox"/> Extremely hazardous waste	

ACCOMPLISHMENTS**Your 1998 SB 14 Plan, Performance Report, or Compliance Checklist, has this information.**

(24) Provide the following information for this waste stream:	
How much waste was generated in the 1998 Reporting Year?	_____ pounds
Describe the source reduction measure(s) implemented since 1998 (add page if needed): _____	

Estimate when this source reduction measure was implemented:	_____ Month _____ year
For this measure, what source reduction quantity was projected in the 1998 Plan:	_____ pounds per year
Estimate the quantity of waste reduced annually by this measure since implementation:	_____ pounds per year
(See Summary Progress Report publication or SB 14 Guidance Manual Chapter 6, to help estimate hazardous waste reduced.)	

PROJECTIONS**Your 2002 SB 14 Plan or Compliance Checklist has this information.**

(25) Provide the following information for this waste stream:	
How much waste was generated in the 2002 Reporting Year?	_____ pounds
Describe the source reduction measure selected to be implemented By 2006: (Add page if needed.) _____	

Estimate when this source reduction measure will be implemented:	_____ month _____ year
What is the annual projected source reduction quantity identified in the 2002 Plan?	_____ pounds per year

Section 8 Additional Information

The Technology Clearinghouse within OPPTD has prepared Waste Audit Studies which are full scale assessments for specific industries that show examples where waste minimization is implemented. The specific industries include:

- ☐ Gold, Silver, Platinum, and other Precious Metals Product and Reclamation
- ☐ Mechanical Equipment Repair Shops
- ☐ Metal Finishing Industry
- ☐ Nonagricultural Pesticide Application Industry
- ☐ Stone, Clay, Glass, and Concrete Products Industries
- ☐ Thermal Metal Working Industry

The following Hazardous Waste Minimization Checklists and Assessment Manuals are available from the Department to assist manufacturers in evaluating their shops for waste minimization opportunities.

- | | |
|---|---|
| <input type="checkbox"/> Auto Paint Shops | <input type="checkbox"/> Marine Ship and Pleasure Vessel Boat Yards |
| <input type="checkbox"/> Automotive Repair Shops | <input type="checkbox"/> Metal Finishing Industry |
| <input type="checkbox"/> Building Construction | <input type="checkbox"/> Paint Formulators |
| <input type="checkbox"/> Ceramic Products | <input type="checkbox"/> Pesticide Formulators |
| <input type="checkbox"/> Commercial Printing Industry | <input type="checkbox"/> Photoprocessing Industry |
| <input type="checkbox"/> Electronics Industry | <input type="checkbox"/> Pollution Prevention Guide for Hospitals |
| <input type="checkbox"/> Jewelry Manufacturers | |

For information about your regulatory requirements, contact the DTSC field office nearest you:

Sacramento Office (916) 255-3545
Clovis Office (209) 297-3901
Berkeley Office (510) 540-2122
Glendale Office (818) 551-2800
Cypress Office (714) 484-5300



